

Application No: 10/810,019      Docket No.: Q198-US1

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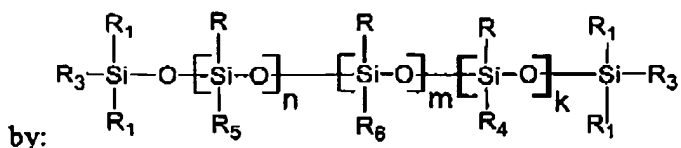
10. (previously presented) The device of claim 9, wherein each non-terminal silicon is linked to at least one side chain that includes a poly(alkylene oxide) moiety.

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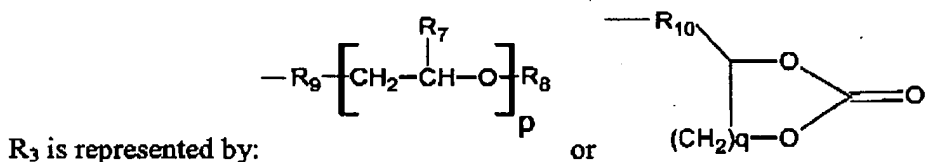
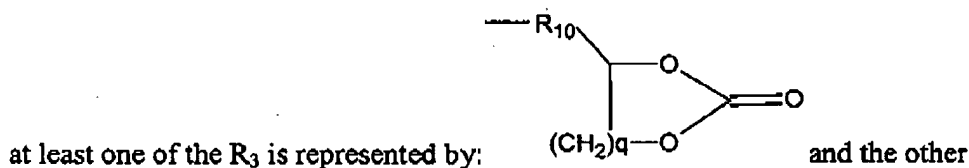
11. (canceled)

12. (previously presented) The device of claim 1, wherein the at least one side chain includes an oxygen linked to a silicon on the backbone.

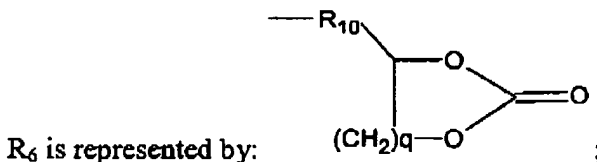
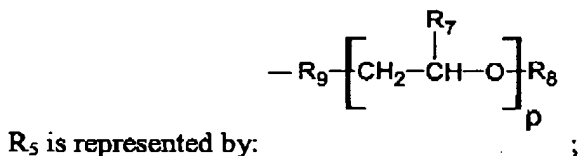
13. (previously presented) The device of claim 1, wherein the polysiloxane is represented



where R is alkyl or aryl; R<sub>1</sub> is alkyl or aryl;



R<sub>4</sub> is a cross link that links the polysiloxane backbone to another polysiloxane backbone;



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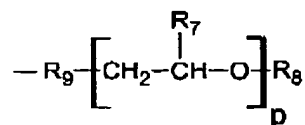
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R<sub>7</sub> is hydrogen; alkyl or aryl; R<sub>8</sub> is alkyl or aryl; R<sub>9</sub> is oxygen or an organic spacer; R<sub>10</sub> is an oxygen or an organic spacer; k is greater than or equal to 0; p is 3 to 20; q is 1 to 2; m is greater than or equal to 0 and n is 2 to 25.

14. (previously presented) The device of claim 13, wherein a ratio of n:m is in a range of 10:1 to 100:1.

15. (canceled)

16. (previously presented) The device of claim 13, wherein at least one R<sub>3</sub> is represented



by:

17. (previously presented) The device of claim 16, wherein R<sub>9</sub> is an organic spacer.

18. (canceled)

19. (previously presented) The device of claim 13, wherein at least one R<sub>3</sub> has a different structure from another R<sub>3</sub>.

20. (previously presented) The device of claim 13, wherein each R<sub>3</sub> has a different structure from each R<sub>5</sub> and from each R<sub>6</sub>.

21. (previously presented) The device of claim 1, wherein the average molecular weight for the polysiloxane is less than or equal to 3000 g/mole.

22. (previously presented) The device of claim 1, wherein the electrolyte includes lithium ions, and wherein a [O]/[Li] ratio is 5 to 50, [O] being the molar concentration of the active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

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23. (previously presented) The device of claim 1, wherein the electrolyte is a liquid.

24. (previously presented) The device of claim 1, wherein the electrolyte is a solid.

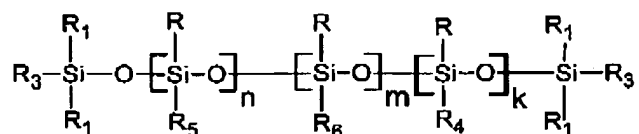
25. (canceled)

26. (previously presented) The device of claim 1, wherein the polysiloxane is a member of an interpenetrating network.

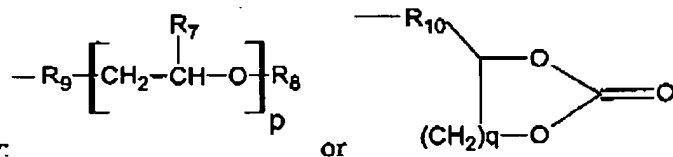
27. (previously presented) The device of claim 1, wherein the electrolyte has a conductivity better than  $1.0 \times 10^{-4}$  S/cm at 25 °C.

28-54. (canceled)

55. (previously presented) An electrochemical device, comprising:  
an electrolyte including a polysiloxane represented by:

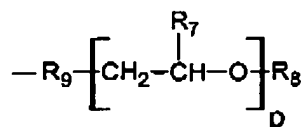


where R is alkyl or aryl; R<sub>1</sub> is alkyl or aryl;



R<sub>3</sub> is represented by:

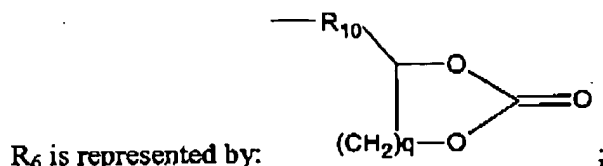
R<sub>4</sub> is a cross link that links the polysiloxane backbone to another polysiloxane backbone;



R<sub>5</sub> is represented by:

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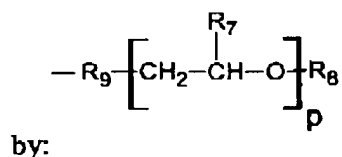
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$R_7$  is hydrogen; alkyl or aryl;  $R_8$  is alkyl or aryl;  $R_9$  is oxygen or an organic spacer;  $R_{10}$  is an oxygen or an organic spacer;  $k$  is greater than or equal to 0;  $p$  is 3 to 20;  $q$  is 1 to 2;  $m$  is greater than or equal to 0 and  $n$  is 2 to 25.

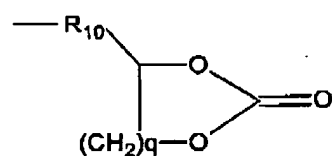
56. (previously presented) The device of claim 55, wherein a ratio of  $n:m$  is in a range of 10:1 to 100:1.

57. (previously presented) The device of claim 55, wherein at least one  $R_3$  is represented



58. (previously presented) The device of claim 57, wherein  $R_9$  is an organic spacer.

59. (previously presented) The device of claim 55, wherein at least one  $R_3$  is represented by:



60. (previously presented) The device of claim 55, wherein at least one  $R_3$  has a different structure from another  $R_3$ .

61. (previously presented) The device of claim 55, wherein each  $R_3$  has a different structure from each  $R_5$  and from each  $R_6$ .

62. (new) The device of claim 1, wherein the portion of the silicons being linked to the side chain that includes the poly(alkylene oxide) moiety excludes the one or more terminal

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silicons that are linked to the at least one side chain that includes the carbonate moiety.